REMARKS

Claims 1-13 and 15-18 are pending in the above-identified application. Claim 14 has been incorporated into claim 1. New claim 18 has been added which is based on original claim 14 and is fully supported at page 7 of the present application, for example.

ISSUES UNDER 35 U.S.C. § 103(a)

Claims 1-17 have been rejected based on three different combinations of references under 35 U.S.C. § 103(a) including: [1] Trefonas '714 (USP 5,350,714) as the primary reference; and [2] Nakanishi '298 (US 2001/0016298 A1), Nishi '736 (USP 5,759,736), Uetani '220 (USP 6,548,220), and Urano '660 (USP 6,656,660) all as secondary references. Basically, Trefonas '714 is cited for the description of the use of an ion exchange resin, activated carbon or a mixture of the two to treat organic solutions, such as photoresist compositions, while the secondary references are cited for the disclosures therein of the specific chemical compounds employed in the compositions of the present invention.

The above-noted rejections are traversed for the following reasons.

Present Invention

The present invention is directed to a chemical amplification resist composition having a "clogging degree" feature of 0.9 or greater. The chemical amplification resist composition of the present invention includes a crude resin, which has been treated with activated carbon, an acid generator and a solvent, as recited in claim 1 for example. The present invention is also directed to a process for producing the chemical amplification resist composition which includes the step of contacting the crude resin with activated carbon to obtain a treated resin and combining the treated resin with an acid generator and an organic solvent as recited in claim 15, for example. The composition of the present invention exhibits an advantageously high clogging degree,

which results in an advantageous reduction in unwanted clogging during processing conditions as noted in the present specification.

Distinctions between Present Invention and Trefonas '714

Trefonas '714 discloses a process for removing contaminants from organic solutions, wherein the organic solution is treated with an ion exchange resin, activated carbon or mixtures of these as noted at the paragraph bridging columns 3-4. A careful review of Trefonas '714 reveals that all of the described and exemplified photoresist compositions therein constitute photoresist compositions which are not "chemical amplification" photoresist compositions, including the combination of all of a resin, an acid generator and a solvent.

Trefonas '714 fails to disclose the treatment of any examples of a "chemical amplification" photoresist composition. Trefonas '714 fails to disclose treatment of a resin before the resin is combined with an acid generator and solvent to form a composition, as in the present invention. Trefonas '714 fails to address any issues associated with improving the clogging degree of a photoresist composition, which issues are both addressed and achieved in connection with the present invention as described in the present specification. Therefore, significant patentable distinction exists between the present invention and Trefonas '714, such that the rejection based on this reference should be withdrawn.

Submission of Evidence of Secondary Considerations

In addition to the above, it is noted that enclosed with this Response is a Declaration submitted under 37 CFR 1.132, hereinafter the "Yamamoto Declaration" which provides comparative test results evidencing unexpected advantages exhibited by the present invention. The Yamamoto Declaration includes Example 1 (present invention) wherein crude resin is treated and then combined with an acid generator and organic solvent, with the resulting composition being analyzed in order to determine the "clogging degree". Comparative Example 1 is a "control" in which only crude (i.e. untreated) resin was used and the clogging degree of the composition analyzed. Comparative Example 2 is an embodiment identical to Example 1, except

that the resin is treated with an ion exchange resin, rather than activated carbon. Comparative Example 2 partially corresponds to Trefonas '714 since the preferred ion exchange resin is used; but Comparative Example 2 is closer than the present invention then any example disclosed in Trefonas '714 in view of the fact that: (i) the resin is treated separately before being combined in a photoresist composition, and (ii) a "chemical amplification" photoresist composition is formed using the resin, both features (i) and (ii) not being disclosed or suggested anywhere in Trefonas '714. The results show that the clogging degree of Example 1 (present invention) is 0.94, which is significantly improved over 0.81 exhibited by Comparative Example 2 (partially corresponding to Trefonas '714). Therefore, the Yamamoto Declaration provides evidence of "secondary considerations" which rebut any allegation that Trefonas '714 could be used to assert *prima facie* obviousness against the claims in the present application.

Distinctions between Present Invention and Other Cited References

It is submitted that greater patentable distinctions exist between the present invention and the other cited references noted above, since all of the cited references, other than Trefonas '714, fail to disclose or suggest the activated carbon treatment of crude resin to improve clogging degree properties before combining the treated resin with the other components of a chemical amplification photoresist composition. Therefore, the rejections based on these other cited references should also be withdrawn. In addition, there fails to be inadequate basis to combine these other cited references with Trefonas '714, since Trefonas '714 does not disclose or address issues concerning "chemical amplification" photoresist compositions containing the combination of a resin, acid generator and solvent, which are requirements for the compositions disclosed by these other cited references. Therefore, significant patentable distinctions exist between the present invention and these other cited references, whether taken separately or improperly combined with Trefonas '714.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number of (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____

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